Local Work Instruction:
Noble Discoverer: Bilge Water Discharge – D011

Approved By:		**Written By:**	Buddy Brooks
Scope:		**Revised By:**	R Lebman / D. Johnson
Issue Date:		**Revision/Review Date:**	
Revision level:		**Next Review Date:**	

SCOPE

This document offers work level instructions for the sampling, testing, and reporting associated with the discharge of bilge water while operating under the guidelines of the NPDES General Permit AKG-28-8100, onboard the *Noble Discoverer*. Bilge consists of water that collects in the lower internal parts of the drilling vessel and must pass through oil/water separators prior to discharge. As such the bilge discharge will occur from the Oil/Water Separator (OWS) located in the starboard stern, below the ship's waterline. No biocides or chemicals will be added to this system.

There are two OWS's on the vessel for separating small amounts of wastewater and mud spills from the deck. Only one is listed on the vessel's International Oil Pollution Prevention Certificate and will only be used to process deck drainage.

All liquids that drain to the bilge will be processed through the OWS located in the main engine room. The oil collection tank is located directly below the separator. Liquids from the decks, shakers, and rig floor will be processed through the MPC then the OWS located in the compressor room as needed. Other sumps on the rig that could possibly contain oily waste water also feed into a separator in the main engine room.

RESPONSIBILITY

The M-I SWACO NPDES Compliance Specialist is responsible to ensure that this LWI has been provided to each person prior to conducting this task. Any personnel that may perform the tasks outlined in this document must be familiar with the process, before the rig begins operating under NPDES regulations.

During active drilling operations, the M-I SWACO NPDES Compliance Specialist is responsible for performing the following tasks:

- Document the flow volume for discharges from the effluent flow meters.
- Document the quantity of any chemical used, if applicable.
- Four times per well, at intervals designated to be representative of the discharge's toxicity, a sample will be collected for initial toxicity screening. Each sample will be collected at a time period selected to reflect discharge processes and operational processes. Collect and document initial toxicity screening samples.
- WET testing will be required if either of the following occurs: 1) Initial rapid toxicity screening threshold criteria are exceeded OR 2) discharge exceeds 10,000 gallons during any 24-hr period and chemicals are added to the system. If WET testing is required, collect and document samples. Immediately transfer the samples to the sample refrigerator for storage awaiting packaging for transportation to the analytical laboratory. Package samples for transport to the analytical laboratory.
- Collect and document a sample for static sheen test for discharge of bilge water (D011) that has been processed through the OWS.
- Collect and document samples for pH analysis.

1.0 References:

1.0 NPDES GP AKG-28-8100

1.0.1 Table 12 – *Effluent Limitations and Monitoring Requirements for Bilge Water (D011).*

1.1 Noble Discoverer Best Management Practices Plan, April 2015

1.2 Noble Discoverer Quality Assurance Project Plan, April 2015

1.3 M-I SWACO Standard Operating Procedures: 1006, 2001, 2012, 2003, 2008, 3004, ENV001.01, TOX045.02, TOX002.05, TOX012.06, TOX014B.02, TOX043.06.

1.4 Shell Exploration & Production Company Alaska Venture 2015 Noble Discoverer Waste Management Plan.

2.0 General Requirements:

2.0 The M-I SWACO NPDES Compliance Specialist is responsible for sampling, testing, and reporting to the Shell Environmental Department all effluent discharge permit conditions while operating under the requirements of the NPDES GP AKG-28-8100. Test results, along with the estimated volumes, will be reported to the Shell Environmental Department.

2.1 The Shell Environmental Department is responsible for maintaining and submitting to EPA through the netDMR all discharges sampling, testing and results.

2.2 Noble is responsible for operating and repairing all equipment associated with this discharge.

3.0 Safety Guidelines:

3.0 Before any operations can take place, all personnel involved in this process must complete the following details if required by operator or contractor:

3.0.1 The Pre-Tour Meeting is when daily activities are discussed.

3.0.2 Job Safety Analysis with all involved parties present.

3.0.3 Review Risk Assessment, if applicable.

3.0.4 Noble Permit to Work.

3.1 Appropriate personal protective equipment must be worn at all times.

4.0 Discharge/Task Description:

4.0 Bilge water originates anywhere on the vessel where water and oil can become mixed during normal vessel operations. As fluid collects in various sumps throughout the rig, it is transferred to bilge storage tanks before being processed through an OWS.

4.1 The M-I SWACO NPDES Compliance Specialist is responsible for conducting and documenting all sampling and testing of bilge water in accordance with the requirements of the Quality Assurance Project Plan. Discharge volumes will be recorded in the NPDES Master Spreadsheet and will be submitted to the Shell Environmental Department for submission to EPA through the netDMR reporting system.

4.2 Noble is responsible for annual testing, operation, and repair of all equipment associated with this discharge. Noble will only discharge bilge water after it has been processed through a US Coast Guard approved oil/water separator and the M-I SWACO NPDES Compliance Specialist has performed all tests as described in Section 5.0 below.

4.3 A WET test will be conducted if the daily volume discharged exceeds 10,000 gallons per day.

4.4 The M-I SWACO NPDES Compliance Specialist will notify the Shell Environmental Department at 907-830-7435, of any upset condition.

5.0 Effluent Limitations and Monitoring Requirements - D011 Bilge Water:

Effluent Parameter	Effluent Limitations		Monitoring Requirements
	Average Monthly Limit	Maximum Daily Limit	Sample Frequency
pH	Report (s.u.)	Monthly	Grab
Free oil	No discharge	Once/discharge & Daily	Grab/Visual
Total Volume	Report (gal)	Monthly	Meter
WET	Report (TU_c)	Use rapid toxicity test 4X/well as initial screen.	Collect grab sample for analysis if results show potential toxicity or 1X/well if discharge >10,000 gal during 24 hr and if chemicals are added to the system.

6.0 Clean-up:

6.0 Follow housekeeping procedures.

7.0 Contingency:

7.0 Notify rig personnel if any equipment isn't working properly.

Revision Log

Date:	Document History:	Revised/reviewed by:	Location: